

MAR 31 2003

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

P#10

Applicants: Charles R. Wescott, James P. Beltzer and Aaron K. Sato

Application No.: 10/034,974 Group Art Unit: 1645

Filed: December 21, 2001 Examiner: Unknown

Confirmation No.: 2108

Title: FIBRIN BINDING MOIETIES USEFUL AS IMAGING AGENTS

CERTIFICATE OF MAILING	
I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as First Class Mail in an envelope addressed to Assistant Commissioner for Patents, P.O. Box 2327, Arlington, VA 22202	
on <u>3.28.03</u>	Signature <u>Danielle G. Lamkin</u>
Date	Signature
_____ <u>Danielle G. Lamkin</u> Typed or printed name of person signing certificate	

INFORMATION DISCLOSURE STATEMENT

Assistant Commissioner for Patents  
P.O. Box 2327  
Arlington, VA 22202

Sir:

This Information Disclosure Statement is submitted:

under 37 CFR 1.129(a), or  
(First/Second submission after Final Rejection)

under 37 CFR 1.97(b), or

(Within any one of the following time periods: three months of filing national application (other than a CPA) or date of entry of the national stage in an international application; or before the mailing date of a first office action on the merits in a non-provisional application, including a CPA, or a Request for Continued Examination).

under 37 CFR 1.97(c) together with either:

a Statement under 37 CFR 1.97(e), as checked below, or

a \$180.00 fee under 37 CFR 1.17(p), or

(After the 37 CFR 1.97(b) time period, but before final action or notice of allowance, whichever occurs first)

under 37 CFR 1.97(d) together with:

a Statement under 37 CFR 1.97(e), as checked below, and

a \$180.00 fee under 37 CFR 1.17(p), or

(Filed after final action or notice of allowance, whichever occurs first, but on or before payment of the issue fee)

under 37 CFR 1.97(i):

Applicant requests that the IDS and cited reference(s) be placed in the application filewrapper.  
(Filed after payment of issue fee)

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Statement Under 37 CFR 1.97(e)

- [ ] Each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement; or
- [ ] No item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned, after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of this Information Disclosure Statement.

Statement Under 37 CFR 1.704(d) (Patent Term Adjustment)

Applies to original applications (other than design) filed on or after May 29, 2000

- [ ] Each item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart application and this communication was not received by any individual designated in § 1.56(c) more than thirty days prior to the filing of the Information Disclosure Statement.

[X] Enclosed herewith is form PTO-1449:

- [X] Copies of the cited references (AA-AK, AA2, AL-AQ, AL2-AQ2, AL3-AQ3, AL4, AR-AZ, AR2-AZ2 and AR3-AV3) are enclosed.
- [ ] Copies of cited references are enclosed except those entered in prior application, U.S. Application No. [ ], to which priority under 35 U.S.C. 120 is claimed. [The earlier application contains copies of the cited references.]
- [ ] The listed references were cited in the enclosed International Search Report in a counterpart foreign application.
- [X] The "concise explanation" requirement (non-English references) for references AL, AN and AM3 under 37 CFR 1.98(a)(3) is satisfied by:
  - [ ] the explanation provided on the attached sheet.
  - [ ] the explanation provided in the Specification.
  - [ ] submission of the enclosed International Search Report.
  - [ ] submission of the enclosed English-language version of a foreign Search Report and/or foreign Office Action.
- [X] the enclosed English language abstract.

[ ] Applicant requests that the following non-published pending applications be considered:

Examiner's  
Initials

\_\_\_\_ U.S. Patent Application No. [ ], by [inventor(s)], filed [ ], Docket No.: [ ]  
\_\_\_\_ U.S. Patent Application No. [ ], by [inventor(s)], filed [ ], Docket No.: [ ]  
\_\_\_\_ U.S. Patent Application No. [ ], by [inventor(s)], filed [ ], Docket No.: [ ]

Examiner

Date

[ ] A copy of each above-cited application, including the current claims, is enclosed.  
[ ] A copy of each above-cited application, including the current claims, is enclosed, except those entered in prior application, U.S. Application No. [ ], to which priority under 35 U.S.C. 120 is claimed.

The Examiner is requested to return a copy of the above list of pending applications indicating which references were considered with the next office communication.

It is requested that the information disclosed herein be made of record in this application.

Method of payment:

[ ] A check for the fee noted above is enclosed, or the fee has been included in the check with the accompanying Reply. A copy of this Statement is enclosed.  
[ ] Please charge Deposit Account 08-0380 in the amount of \$[ ]. A copy of this Statement is enclosed.  
[X] Please charge any deficiency in fees and credit any overpayment to Deposit Account 08-0380.

Respectfully submitted,

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Dated:

3/27/3

PTO-1449 REPRODUCED			ATTORNEY DOCKET NO. 3421.1008-001	APPLICATION NO. 10/034,974
INFORMATION DISCLOSURE CITATION IN AN APPLICATION			APPLICANTS Charles R. Wescott, James P. Beltzer and Aaron K. Sato	
March 25, 2003  (Use several sheets if necessary)			FILING DATE December 21, 2001	CONFIRMATION NO. 2108
			GROUP 1645	

## U.S. PATENT DOCUMENTS

EXAM- INER INI- TIAL		DOCUMENT NUMBER O I P E MAR 31 2003 PATENT & TRADEMARK OFFICE	ISSUE DATE / PUBLICATION DATE	NAME
	AA	4,808,405	28 FEB 89	Smith et al.
	AB	5,021,556	04 JUN 91	Srinivasan
	AC	5,075,099	24 DEC 91	Srinivasan et al.
	AD	5,171,298	15 DEC 92	Walker et al.
	AE	5,223,409	29 JUN 93	Ladner et al.
	AF	5,364,613	15 NOV 94	Sieving et al.
	AG	5,367,080	22 NOV 94	Toner et al.
	AH	5,674,469	07 OCT 97	Jablonski
	AI	5,720,934	24 FEB 98	Dean et al.
	AJ	5,849,261	15 DEC 98	Dean et al.
	AK	5,879,658	09 MAR 99	Dean et al.
	AA2	5,886,142	23 MAR 99	Thakur et al.

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION YES      NO
	AL	WO 93/25241	23 DEC 93	PCT			
	AM	WO 95/28967	02 NOV 95	PCT			
	AN	WO 96/17628	13 JUN 96	PCT			
	AO	WO 96/23524	08 AUG 96	PCT			
	AP	WO 97/18841	29 MAY 97	PCT			
	AQ	WO 97/29783	21 AUG 97	PCT			
	AL2	WO 98/05364	12 FEB 98	PCT			
	AM2	WO 98/17324	30 APR 98	PCT			
	AN2	WO 98/18495	07 MAY 98	PCT			
	AO2	WO 98/18496	07 MAY 98	PCT			
	AP2	WO 98/18497	07 MAY 98	PCT			
	AQ2	WO 98/18498	07 MAY 98	PCT			
	AL3	WO 98/18501	07 MAY 98	PCT			

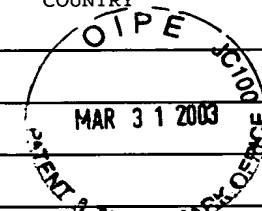
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## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY 	CLASS	SUB-CLASS	TRANSLATION YES      NO
AM3		WO 98/47538	29 OCT 98	PCT			APR 01 2003
AN3		WO 98/52618	26 NOV 98	PCT			
AO3		WO 98/53857	03 DEC 98	PCT			
AP3		WO 98/57666	23 DEC 98	PCT			
AQ3		WO 01/09188	08 FEB 01	PCT			
AL4		0 297 882 A2	04 JAN 89	EPO			

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

AR	Alavi et al., "Radiolabeled Antifibrin Antibody in the Detection of Venous Thrombosis: Preliminary Results," <i>Radiology</i> , 175:79-85 (1990).
AS	Alexander et al., "Intracranial Black-Blood MR Angiography with High-Resolution 3D Fast Spin Echo," <i>Magnetic Resonance in Medicine</i> , 40(2):298-310 (1998).
AT	Anderson and Miller, "Fiber Optic Immunochemical Sensor for Continuous, Reversible Measurement of Phenytoin," <i>Clin. Chem.</i> , 34(7):1417-1421 (1988).
AU	Bautovich et al., "Detection of Deep Venous Thrombi and Pulmonary Embolus with Technetium-99m-DD-3B6/22 Anti-fibrin Monoclonal Antibody Fab' Fragment," <i>J. Nucl. Med.</i> , 35:195-202 (1994).
AV	Edelman et al., "Extracranial Carotid Arteries: Evaluation with "Black-Blood" MR Angiography," <i>Radiology</i> , 177(1):45-50 (1990).
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AX	Goodrich et al., "A Quantitative Study of Ramped Radio Frequency, Magnetization Transfer, and Slab Thickness in Three-Dimensional Time-of-Flight Magnetic Resonance Angiography in a Patient Population," <i>Investigative Radiology</i> , 31(6):323-332 (1996).
AY	Gronas et al., "Flow-Independent Angiography for Peripheral Vascular Disease: Initial In-Vivo Results," <i>Journal of Magnetic Resonance Imaging</i> , 7(4):637-643 (1997).
AZ	Harker et al., "Role of Platelets and Thrombosis in Mechanisms of Acute Occlusion and Restenosis After Angioplasty," <i>Am. J. Cardiology</i> , 60:20B-28B (1987).

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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)			
AR2	Hermans et al., "Fibrin: Structure and Interactions," <i>Semin. Thromb. Hemost.</i> , 8:11-24 (1982).		
AS2	Hutchinson, "Evanescent Wave Biosensors," <i>Molec. Biotechnology</i> , 3:47-54 (1995).		
AT2	Knight et al., "Fragment E <sub>1</sub> Labeled with I-123 in the Detection of Venous Thrombosis," <i>Radiology</i> , 156:509-514 (1985).		
AU2	Lanza et al., "High-Frequency Ultrasonic Detection of Thrombi with a Targeted Contrast System," <i>Ultrasound in Med. &amp; Bio.</i> , 23(6):863-870 (1997).		
AV2	Malmborg et al., "Selection of Binders from Phage Displayed Antibody Libraries Using the BIACore™ Biosensor," <i>J. Immunol. Methods</i> , 198(1):51-57 (1996).		
AW2	Merrifield, "Solid Phase Peptide Synthesis. I. The Synthesis of a Tetrapeptide," <i>J. Am. Chem. Soc.</i> , 85:2149-2154 (1963).		
AX2	Moskowitz and Budzynski, "The (DD)E Complex is Maintained by a Composite Fibrin Polymerization Site," <i>Biochemistry</i> , 33:12937-12944 (1994).		
AY2	Muto et al., "Initial Clinical Experience with Tc-99m P280, a Synthetic Peptide Useful for Imaging Thrombi and Pulmonary Emboli," <i>Radiology</i> , 189(Suppl.), 303 (1993).		
AZ2	Olexa et al., "Structure of Fragment E Species from Human Cross-Linked Fibrin," <i>Biochemistry</i> , 20:6139-6145 (1981).		
AR3	Palabrida et al., "Thrombus Imaging in a Primate Model with Antibodies Specific for an External Membrane Protein of Activated Platelets," <i>Proc. Natl. Acad. Sci.</i> , 86:1036-1040 (1989).		
AS3	Rosebrough et al., "Thrombus Imaging: A Comparison of Radiolabeled GC4 and T2G1s Fibrin-Specific Monoclonal Antibodies," <i>J. Nuc. Med.</i> , 31:1048-1054 (1990).		
AT3	Schuck, "Reliable Determination of Binding Affinity and Kinetics Using Surface Plasmon Resonance Biosensors," <i>Current Opinion in Biotechnology</i> , 8:498-502 (1997).		
AU3	Spraggon et al., "Crystal Structures of Fragment D from Human Fibrinogen and its Crosslinked Counterpart from Fibrin," <i>Nature</i> , 389:455-462 (1997).		
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EXAMINER		DATE CONSIDERED	